Applicant: Coach Wei, et al. U.S.S.N.: 10/017,183

Filing Date: 12/07/2001

EMC Docket No.: EMC-06-235(PRO)ORD1

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

Application.

Listing of Claims:

1. (Previously presented) A method for delivering an application over a network from a

backend server to a plurality of client devices, at least two of the client devices differing in type

and display capabilities, the method comprising the steps of:

receiving a request from a client and determining a type of the client;

having the application invoke a Graphic User Interface (GUI) Application Programming

Interface (API) to present the application's user interface;

in response to the type of the client, replacing the GUI API with a re-implemented,

network aware GUI API comprising a User Interface (UI) record, the UI record comprising pre-

determined format based messages that describe the Graphical User Interface, event processing

registries, and other related information corresponding to a presentation layer of the application

in high level, object level, messages;

sending such messages to the client device via the network;

processing the messages in the UI record and rendering a user interface by a client-side

program operating at the client, which delivers a user experience for that device according to the

display capability of the client;

rendering the user interface on the client device;

transmitting a plurality of necessary user input and a plurality of client-side events back

to the server via a predetermined protocol;

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processing the user input and client-side events on the backend server, translating the events and inputs as if they were locally generated, and sending such translated events and inputs to the application for processing;

encoding and routing output of the application to the client device using the predetermined messaging format; and,

further processing the output by the client-side program to refresh the Graphical User Interface;

wherein use of the re-implemented network aware API enables the application and GUI API to be developed once and deployed multiple times for use by multiple different types of client devices.

- 2. (Previously presented) The method of Claim 1, wherein the GUI API and the event processing API are represented as classes within Java Foundation Classes.
- 3. (Previously presented) The method of Claim 1, wherein the client-side program is a computer program based on an Operating System's API.
- 4. (Previously presented) The method of Claim 1, wherein the client-side program is a wireless device program written using the device's Operating System's API.
- 5. (Previously presented) The method of Claim 1, wherein the client-side program is a program written using a Java API.

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6. (Previously presented) The method of Claim 5, wherein the JAVA API is selected from

the groups consisting of: Abstract Windows Toolkit (AWT), Personal Java, Java 2 Micro

Edition based GUI API or Java Swing.

7. (Previously presented) The method of Claim 1, wherein the predetermined protocol is

Hyper Text Transfer Protocol HTTP.

8. (Previously presented) The method of Claim 1, wherein the predetermined protocol is

Hyper Text Transfer Protocol over Secure Socket Layer (HTTPS).

9. (Previously Presented) The method of Claim 1, wherein predetermined protocol is

Wireless Application Protocol (WAP).

10. (Original) The method of Claim 1, wherein predetermined protocol is proprietary.

11. (Previously presented) The method of Claim 1, wherein the predetermined messaging

format is based on Extended Markup Language (XML).

12. (Previously presented) The method of Claim 1, wherein the predetermined messaging

format is proprietary.

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21.

22.

(Cancelled)

(Cancelled)

(Cancelled)

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13. (Original) The method of Claim 1, wherein the network is the Internet. 14. (Original) The method of Claim 1, wherein the network is a local area network. 15. (Original) The method of Claim 8, wherein the local area network is a bandwidthlimited slow speed network. 16. (Original) The method of Claim 1, wherein the network includes a wireless network. 17. (Previously presented) The method of Claim 11, wherein the client device is selected from the group consisting of workstations, desktops, laptops, Personal Data Assistants (PDAs), and wireless devices. 18. (Original) The method of Claim 1, wherein the server and the client device are combined into one entity. 19. (Cancelled)

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23. (Cancelled)

24. (Previously presented) The method of Claim 1 wherein the application code is not modified when distributing the application and the application code is not distributed to the client device.

25. (Previously presented) The method of Claim 1 used to distribute a plurality of pre-existing applications.